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EXAMINER	
LOVEL, KIMBERLY M	

ART UNIT	PAPER NUMBER
2167	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/675,197	ARMITANO, ROBERT	
	Examiner	Art Unit	
	Kimberly Lovel	2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 September 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *9/30/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-34 are rejected.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "110" in Fig 1 has been used to designate both a router and a user. The specification identifies the router as item 155.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Fig 3, item 300.

4. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

5. Claims 21 and 22 objected to because of the following informalities:

Claim 21 recites the limitation "the set of protocol markers" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 22 recites the limitation "the set of protocol markers" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 10, 30-33 and 34-35 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 10 recites a content comparator adapted to compare first content with a second content, the comparator comprising: a protocol identification module configured to identify a first protocol associated with the first content and a second protocol associated with the second content; a plurality of data segmentation modules configured to select a set of data segments from each of the first content and the second content; a plurality of signature computation modules configured to generate a first signature of the first content and a second signature of the second content; and a

signature comparison module configured to compare the first signature with the second signature.

The content comparator can take the form of an entirely software embodiment. Therefore, the claim is directed towards software per se. Software per se fails to produce a tangible result. In order for the subject matter to be considered statutory, it must produce a useful, concrete and tangible result.

Claim 30 recites a protocol maker identifier for generating a signature of a content comprising: a data segmentation module configured to select a set of data segments from the content; and a signature computation module configured to generate the signature from the set of data segments.

The protocol maker identifier can take the form of an entirely software embodiment. Therefore, the claim is directed towards software per se. Software per se fails to produce a tangible result. In order for the subject matter to be considered statutory, it must produce a useful, concrete and tangible result. Claims 31-33, which are dependent on claim 30 fail to overcome the rejection and therefore are rejected on the same grounds as claim 30.

Claim 34 recites a network caching device adapted to utilize a signature associated with a protocol for caching decisions, the network caching device comprising: means for determining a protocol of new contents; means for computing a signature of the content; and means for comparing the computed signature of the new content with a signature of other content.

A network cache is a data structure per se. A data structure per se represents nonfunctional descriptive material, which is considered to be nonstatutory subject matter. Claim 35, which is dependent on claim 34 fails to overcome the rejection and therefore is rejected on the same grounds as claim 34.

To expedite a complete examination of the instant application, the claims rejected under 35 U.S.C. 101 (nonstatutory) above are further rejected as set forth below in anticipation of applicant amending these claims to place them within the four statutory categories of invention.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-4, 10-13, 19, 20, 23-26 and 30-32 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent No 6,501,857 to Gotsmon et al (hereafter Gotsmon et al).

Referring to claim 1, Gotsmon et al disclose a method for comparing a first content with a second content to determine whether the contents are identical (see abstract), the method comprising the steps of:

identifying a protocol encoding the first content and second content (see column 13, line 63 – column 14, line 22 – the vector multiplication results are considered to represent the *protocol*);

computing a first signature of the first content (see column 13, lines 1-5 – the directory is considered to represent the *first content*) and a second signature of the second content (see column 6, lines 42-48 – the target images are considered to represent the *second content*); and

comparing the first computed signature with the second signature to determine whether the first content is identical to the second content (see column 13, line 63 – column 14, line 1 – the search phase compares the signatures of the two contents).

Referring to claim 2, Gotsmon et al disclose the method of claim 1 further comprising the steps of:

selecting a first set of data segments from the first content and a second set of data segments from the second content (see column 3, lines 39-53 – the portions of data are considered to represent the segments of data); and

using the selected first set of data segments and the second set of data segments to compute the first signature and the second signature (see column 3, lines 39-53 – portions are considered to represent *data segments*; the vectors are considered to represent the computed *signatures*).

Referring to claim 3, Gotsmon et al disclose the method of claim 2 wherein the selected first set of data segments and second set of data segments comprise locations

associated with one or more protocol markers (see column 13, lines 35-45 – the target image position is considered to represent the *locations*).

Referring to claim 4, Gotsmon et al disclose the method of claim 1 wherein the step of computing the signature of the first content and the signature of the second content further comprises the steps of:

identifying one or more protocol markers associated with the first content (see column 13, line 63 – column 14, line 22 – matching the signature to the row is considered to represent associating protocol markers); and

identifying one or more protocol markers associated with the second content (see column 13, line 63 – column 14, line 22 – matching the signature to the row is considered to represent associating protocol markers).

Referring to claim 10, Gotsman et al disclose a content comparator adapted to compare first content with a second content (see abstract), the comparator comprising:

a protocol identification module configured to identify a first protocol associated with the first content and a second protocol associated with the second content (see column 6, lines 1-6 and column 13, line 63 – column 14, line 22 – the vector multiplication results are considered to represent the *protocol*);

a plurality of data segmentation modules configured to select a set of data segments from each of the first content and the second content (see column 6, lines 1-6 and column 3, lines 39-53 – the portions of data are considered to represent the *data segments*; the vectors are considered to represent the *signatures*);

a plurality of signature computation modules configured to generate a first signature of the first content (see column 6, lines 1-6 and column 13, lines 1-5 – the directory is considered to represent the *first content*) and a second signature of the second content (see column 6, lines 1-6 and column 6, lines 42-48 – the target images are considered to represent the *second content*); and

a signature comparison module configured to compare the first signature with the second signature (see column 6, lines 1-6 and column 13, line 63 – column 14, line 1 – the search phase compares the signatures of the two contents).

Referring to claim 11, Gotsmon et al disclose an apparatus for comparing a first content with a second content (see abstract), the apparatus comprising:

means for identifying a protocol encoding the first content and the second content (see column 13, line 63 – column 14, line 22 – the vector multiplication results are considered to represent the *protocol*);

means for selecting a set of data segments from the first content and the second content (see column 3, lines 39-53 – the portions of data are considered to represent the *data segments*);

means for computing a signature of the first content (see column 13, lines 1-5 – the directory is considered to represent the *first content*) and a signature of the second content (see column 6, lines 42-48 – the target images are considered to represent the *second content*); and

means for comparing the computed signature of the first content with the computed signature of the second content (see column 13, line 63 – column 14, line 1 – the search phase compares the signatures of the two contents).

Referring to claim 12, Gotsman et al disclose the apparatus of claim 11 wherein the selected data segments comprises locations associated with one or more protocol markers (see column 13, lines 35-45 – the target image position is considered to represent the *locations*).

Referring to claim 13, Gotsman et al disclose the apparatus of claim 11 wherein the means for computing the signature of the first content and the signature of the second content further comprises:

means for identifying one or more protocol markers associated with the first content (see column 13, line 63 – column 14, line 22 – the vector multiplication results are considered to represent the *protocol*); and

means for identifying one or more protocol markers associated with the second content (see column 13, line 63 – column 14, line 22 – the vector multiplication results are considered to represent the *protocol*).

Referring to claim 19, Gotsman et al disclose a method to compare a first content with a second content in a network storage environment, the method comprising the steps of:

receiving the first content (see column 6, lines 25-28 – the directory is considered to represent the *first content*);

computing a signature of the first content (see column 13, lines 1-5 – the directory is considered to represent the *first content;* the vector is considered to represent the *signature*);

comparing the computed signature of the first content with a signature of the second content (see column 13, line 63 – column 14, line 1 – the search phase compares the signatures of the two contents); and

identifying, if the computed signature of the first content matches the signature of the second content, that the first content is identical to the second content (see column 13, line 63 – column 14, line 1 – the search phase identifies if the two signatures match).

Referring to claim 20, Gotsman et al disclose the method of claim 19 wherein the step of computing the signature of the first further comprises the steps of:

identifying a set of protocol markers associated with the content (see column 13, line 63 – column 14, line 22 – matching the signature to the row is considered to represent associating protocol markers); and

generating the signature from the identified set of protocol markers (see column 13, line 63 – column 14, line 22 – the signature is generated).

Referring to claim 23, Gotsman et al disclose the method of claim 19 wherein a size of the received content is utilized in creating the signature (see column 11, line 44 – column 12, line 2 – fingerprinting matches by size).

Referring to claim 24, Gotsman et al disclose a method for identifying content using a protocol associated with the content as a signature (see abstract), the method comprising the steps of:

determining the protocol associated with the content (see column 13, line 63 – column 14, line 22 – the vector multiplication results are considered to represent the *protocol*);

identifying a set of markers associated with the protocol (see column 13, line 63 – column 14, line 22 – matching the signature to the row is considered to represent associating protocol markers);

obtaining a set of markers from the content using the set of marker associated with the protocol (see column 13, line 63 – column 14, line 22 – matching the signature to the row is considered to represent obtaining markers); and

generating a signature of the content using the identified markers (see column 13, line 63 – column 14, line 1 – the search phase compares the signatures of the two contents).

Referring to claim 25, Gotsman et al disclose the method of claim 24 wherein the identified markers are within a subset of the entire content (see column 3, lines 39-53 – a portion is considered to represent a *subset*).

Referring to claim 26, Gotsman et al disclose the method of claim 24 wherein a size associated with the content is utilized to uniquely identify the content (see column 11, line 44-line 52 – fingerprinting matches by size).

Referring to claim 30, Gotsman et al disclose a protocol maker identifier for generating a signature of a content (see abstract) comprising:

a data segmentation module configured to select a set of data segments from the content (see column 6, lines 1-6 and column 3, lines 39-53 – the portions of data are considered to represent the *data segments*); and

a signature computation module configured to generate the signature from the set of data segments (see column 6, lines 1-6 and column 6, lines 42-48 – computing a vector signature).

Referring to claim 31, Gotsman et al disclose the protocol maker identifier of claim 30 further comprising a protocol identification module configured to identify a protocol associated with the content (see column 6, lines 1-6 and column 13, line 63 – column 14, line 22 – the search phase identifies the protocols).

Referring to claim 32, Gotsman et al disclose the protocol maker identifier of claim 30 wherein the signature comprises a set of protocol markers (see column 13, line 63 – column 14, line 22 - the signature is generated using protocol markers).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 5-9, 14-18, 21-22 and 33 rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No 6,501,857 to Gotsmon et al as applied respectively to claims 4, 13, 19 and 30 above, and further in view of US Patent No 7,037,196 to Kobayashi et al (hereafter Kobayashi et al).

Referring to claim 5, Gotsmon et al disclose protocol markers. However, Gotsmon et al fail to explicitly teach the further limitation wherein the one or more protocol markers associated with the first content comprises discrete cosine coefficients. Kobayashi et al also disclose a method for comparing a first content with a second content to determine whether the contents are identical using protocol markers (see abstract). In particular, Kobayashi et al disclose the further limitation wherein the one or more protocol markers associated with the first content comprises discrete cosine coefficients (see column 14, lines 4-11 – the protocols use discrete cosine coefficients).

It would have been obvious to one of ordinary skill at the time the invention was made to use the Kobayashi et al's concept of discrete cosine coefficients with Gotsmon et al's concept of protocol markers. One would have been motivated to do so in order to increase the abilities of electronic systems to detect the presence of predefined objects within an image (Gotsmon et al: see column 1, lines 19-22).

Referring to claim 6, Gotsmon et al disclose protocol markers. However, Gotsmon et al fail to explicitly teach the further limitation wherein the one or more protocol markers associated with the second content comprises discrete cosine coefficients. Kobayashi et al also disclose a method for comparing a first content with a

second content to determine whether the contents are identical using protocol markers (see abstract). In particular, Kobayashi et al disclose the further limitation wherein the one or more protocol markers associated with the second content comprises discrete cosine coefficients (see column 14, lines 4-11 – the protocols use discrete cosine coefficients).

It would have been obvious to one of ordinary skill at the time the invention was made to use the Kobayashi et al's concept of discrete cosine coefficients with Gotsmon et al's concept of protocol markers. One would have been motivated to do so in order to increase the abilities of electronic systems to detect the presence of predefined objects within an image (Gotsmon et al: see column 1, lines 19-22).

Referring to claim 7, Gotsmon et al disclose protocol markers. However, Gotsmon et al fail to explicitly teach the further limitation wherein the one or more protocol markers associated with the first content comprises motion vectors. Kobayashi et al also disclose a method for comparing a first content with a second content to determine whether the contents are identical using protocol markers (see abstract). In particular, Kobayashi et al disclose the further limitation wherein the one or more protocol markers associated with the first content comprises motion vectors (see column 14, lines 12-16 – vectors at a high speed are considered to represent *motion vectors*).

It would have been obvious to one of ordinary skill at the time the invention was made to use the Kobayashi et al's concept of motion vectors with Gotsmon et al's concept of protocol markers. One would have been motivated to do so in order to

increase the abilities of electronic systems to detect the presence of predefined objects within an image (Gotsmon et al: see column 1, lines 19-22).

Referring to claim 8, Gotsmon et al disclose protocol markers. However, Gotsmon et al fail to explicitly teach the further limitation wherein the one or more protocol markers associated with the second content comprises motion vectors. Kobayashi et al also disclose a method for comparing a first content with a second content to determine whether the contents are identical using protocol markers (see abstract). In particular, Kobayashi et al disclose the further limitation wherein the one or more protocol markers associated with the second content comprises motion vectors (see column 14, lines 12-16 – vectors at a high speed are considered to represent *motion vectors*).

It would have been obvious to one of ordinary skill at the time the invention was made to use the Kobayashi et al's concept of motion vectors with Gotsmon et al's concept of protocol markers. One would have been motivated to do so in order to increase the abilities of electronic systems to detect the presence of predefined objects within an image (Gotsmon et al: see column 1, lines 19-22).

Referring to claim 9, Gotsmon et al disclose protocol markers. However, Gotsmon et al fail to explicitly teach the further limitations of identifying a length of the first content and identifying a length of the second content. Kobayashi et al also disclose a method for comparing a first content with a second content to determine whether the contents are identical using protocol markers (see abstract). In particular, Kobayashi et al disclose the further limitations of identifying a length of the first content

(see column 33, lines 4-11 – identifying the length of the data to determine if the data needs to be split up) and identifying a length of the second content (see column 33, lines 4-11 – identifying the length of the data to determine if the data needs to be split up).

It would have been obvious to one of ordinary skill at the time the invention was made to use the Kobayashi et al's concept of identifying length with Gotsmon et al's concept of protocol markers. One would have been motivated to do so in order to increase the abilities of electronic systems to detect the presence of predefined objects within an image (Gotsmon et al: see column 1, lines 19-22).

Referring to claim 14, Gotsmon et al disclose protocol markers. However, Gotsmon et al fail to explicitly teach the further limitation wherein the one or more protocol markers associated with the first content comprises discrete cosine coefficients. Kobayashi et al also disclose an apparatus for comparing a first content with a second content to determine whether the contents are identical using protocol markers (see abstract). In particular, Kobayashi et al disclose the further limitation wherein the one or more protocol markers associated with the first content comprises discrete cosine coefficients (see column 14, lines 4-11 – the protocols use discrete cosine coefficients).

It would have been obvious to one of ordinary skill at the time the invention was made to use the Kobayashi et al's concept of discrete cosine coefficients with Gotsmon et al's concept of protocol markers. One would have been motivated to do so in order

to increase the abilities of electronic systems to detect the presence of predefined objects within an image (Gotsmon et al: see column 1, lines 19-22).

Referring to claim 15, Gotsmon et al disclose protocol markers. However, Gotsmon et al fail to explicitly teach the further limitation wherein the one or more protocol markers associated with the second content comprises discrete cosine coefficients. Kobayashi et al also disclose an apparatus for comparing a first content with a second content to determine whether the contents are identical using protocol markers (see abstract). In particular, Kobayashi et al disclose the further limitation wherein the one or more protocol markers associated with the second content comprises discrete cosine coefficients (see column 14, lines 4-11 – the protocols use discrete cosine coefficients).

It would have been obvious to one of ordinary skill at the time the invention was made to use the Kobayashi et al's concept of discrete cosine coefficients with Gotsmon et al's concept of protocol markers. One would have been motivated to do so in order to increase the abilities of electronic systems to detect the presence of predefined objects within an image (Gotsmon et al: see column 1, lines 19-22).

Referring to claim 16, Gotsmon et al disclose protocol markers. However, Gotsmon et al fail to explicitly teach the further limitation wherein the one or more protocol markers associated with the first content comprises motion vectors. Kobayashi et al also disclose an apparatus for comparing a first content with a second content to determine whether the contents are identical using protocol markers (see abstract). In particular, Kobayashi et al disclose the further limitation wherein the one or more

protocol markers associated with the first content comprises motion vectors (see column 14, lines 12-16 – vectors at a high speed are considered to represent *motion vectors*).

It would have been obvious to one of ordinary skill at the time the invention was made to use the Kobayashi et al's concept of motion vectors with Gotsmon et al's concept of protocol markers. One would have been motivated to do so in order to increase the abilities of electronic systems to detect the presence of predefined objects within an image (Gotsmon et al: see column 1, lines 19-22).

Referring to claim 17, Gotsmon et al disclose protocol markers. However, Gotsmon et al fail to explicitly teach the further limitation wherein the one or more protocol markers associated with the second content comprises motion vectors. Kobayashi et al also disclose an apparatus for comparing a first content with a second content to determine whether the contents are identical using protocol markers (see abstract). In particular, Kobayashi et al disclose the further limitation wherein the one or more protocol markers associated with the second content comprises motion vectors (see column 14, lines 12-16 – vectors at a high speed are considered to represent *motion vectors*).

It would have been obvious to one of ordinary skill at the time the invention was made to use the Kobayashi et al's concept of motion vectors with Gotsmon et al's concept of protocol markers. One would have been motivated to do so in order to increase the abilities of electronic systems to detect the presence of predefined objects within an image (Gotsmon et al: see column 1, lines 19-22).

Referring to claim 18, Gotsmon et al disclose protocol markers. However, Gotsmon et al fail to explicitly teach the further limitations of identifying a length of the first content and identifying a length of the second content. Kobayashi et al also disclose an apparatus for comparing a first content with a second content to determine whether the contents are identical using protocol markers (see abstract). In particular, Kobayashi et al disclose the further limitations of identifying a length of the first content (see column 33, lines 4-11 – identifying the length of the data to determine if the data needs to be split up) and identifying a length of the second content (see column 33, lines 4-11 – identifying the length of the data to determine if the data needs to be split up).

It would have been obvious to one of ordinary skill at the time the invention was made to use the Kobayashi et al's concept of identifying length with Gotsmon et al's concept of protocol markers. One would have been motivated to do so in order to increase the abilities of electronic systems to detect the presence of predefined objects within an image (Gotsmon et al: see column 1, lines 19-22).

Referring to claim 21, Gotsmon et al disclose protocol markers. However, Gotsmon et al fail to explicitly teach the further limitation wherein the set of protocol markers further comprise a set of discrete cosine coefficients. Kobayashi et al also disclose a method for comparing a first content with a second content to determine whether the contents are identical using protocol markers (see abstract). In particular, Kobayashi et al disclose the further limitation wherein the set of protocol markers further

comprise a set of discrete cosine coefficients (see column 14, lines 4-11 – the protocols use discrete cosine coefficients).

It would have been obvious to one of ordinary skill at the time the invention was made to use the Kobayashi et al's concept of discrete cosine coefficients with Gotsmon et al's concept of protocol markers. One would have been motivated to do so in order to increase the abilities of electronic systems to detect the presence of predefined objects within an image (Gotsmon et al: see column 1, lines 19-22).

Referring to claim 22, Gotsmon et al disclose protocol markers. However, Gotsmon et al fail to explicitly teach the further limitation wherein the set of protocol markers further comprises one or more motion vectors. Kobayashi et al also disclose a method for comparing a first content with a second content to determine whether the contents are identical using protocol markers (see abstract). In particular, Kobayashi et al disclose the further limitation wherein the set of protocol markers further comprises one or more motion vectors (see column 14, lines 12-16 – vectors at a high speed are considered to represent *motion vectors*).

It would have been obvious to one of ordinary skill at the time the invention was made to use the Kobayashi et al's concept of motion vectors with Gotsmon et al's concept of protocol markers. One would have been motivated to do so in order to increase the abilities of electronic systems to detect the presence of predefined objects within an image (Gotsmon et al: see column 1, lines 19-22).

Referring to claim 33, Gotsmon et al disclose protocol markers. However, Gotsmon et al fail to explicitly teach the further limitation wherein the set of protocol

markers further comprise a set of discrete cosine coefficients. Kobayashi et al also disclose a method for comparing a first content with a second content to determine whether the contents are identical using protocol markers (see abstract). In particular, Kobayashi et al disclose the further limitation wherein the set of protocol markers further comprise a set of discrete cosine coefficients (see column 14, lines 4-11 – the protocols use discrete cosine coefficients).

It would have been obvious to one of ordinary skill at the time the invention was made to use the Kobayashi et al's concept of discrete cosine coefficients with Gotsmon et al's concept of protocol markers. One would have been motivated to do so in order to increase the abilities of electronic systems to detect the presence of predefined objects within an image (Gotsmon et al: see column 1, lines 19-22).

11. Claims 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No 6,501,857 to Gotsmon et al as applied to claim 24 above, and further in view of US Patent No 6,674,769 to Viswanath (hereafter Viswanath).

Referring to claim 27, Gotsmon et al disclose a method for identifying content using a protocol associated with the content as a signature. However, Gotsmon et al fail to explicitly teach the further limitation wherein the signature is utilized in a network caching device to determine whether data should be forwarded from the network caching device. Viswanath discloses a method for identifying content using signatures in a network that utilizes caching (see abstract). In particular, Viswanath discloses the further limitation wherein the signature is utilized in a network caching device to

determine whether data should be forwarded from the network caching device (see column 2, lines 56-64 – caching data).

It would have been obvious to one of ordinary skill at the time the invention was made to use the Viswanath's concept of network caching as a subcomponent to Gotsmon et al's method for identifying content using a protocol associated with the content as a signature. One would have been motivated to do so in order to increase the abilities of electronic systems to detect the presence of predefined objects (Gotsmon et al: see column 1, lines 19-22).

Referring to claim 28, Gotsmon et al disclose a method for identifying content using a protocol associated with the content as a signature. However, Gotsmon et al fail to explicitly teach the further limitation wherein the signature is utilized to determine if a local copy of the content should be accessed. Viswanath discloses a method for identifying content using signatures in a network that utilizes caching (see abstract). In particular, Viswanath discloses the further limitation wherein the signature is utilized to determine if a local copy of the content should be accessed (see column 6, lines 46-56 – accessing local copy).

It would have been obvious to one of ordinary skill at the time the invention was made to use the Viswanath's concept of accessing a local copy as a subcomponent to Gotsmon et al's method for identifying content using a protocol associated with the content as a signature. One would have been motivated to do so in order to increase the abilities of electronic systems to detect the presence of predefined objects (Gotsmon et al: see column 1, lines 19-22).

Referring to claim 29, Gotsmon et al disclose a method for identifying content using a protocol associated with the content as a signature. However, Gotsmon et al fail to explicitly teach the further limitation wherein the signature is utilized to determine if a remote copy of the content should be accessed. Viswanath discloses a method for identifying content using signatures in a network that utilizes caching (see abstract). In particular, Viswanath discloses the further limitation wherein the signature is utilized to determine if a remote copy of the content should be accessed (see column 6, lines 46-56 – accessing remote copy).

It would have been obvious to one of ordinary skill at the time the invention was made to use the Viswanath's concept of accessing a remote copy as a subcomponent to Gotsmon et al's method for identifying content using a protocol associated with the content as a signature. One would have been motivated to do so in order to increase the abilities of electronic systems to detect the presence of predefined objects (Gotsmon et al: see column 1, lines 19-22).

12. Claims 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No 6,501,857 to Gotsmon et al in view of US Patent No 6,674,769 to Viswanath.

Referring to claim 34, Gotsman et al disclose a device adapted to utilize a signature associated with a protocol. In particular, Gotsman et al disclose a device adapted to utilize a signature associated with a protocol (see abstract), the network caching device comprising:

means for determining a protocol of new contents (see column 13, line 63 – column 14, line 22 – the vector multiplication results are considered to represent the *protocol*);

means for computing a signature of the content (see column 13, lines 1-5 – compute the signature for the directory); and

means for comparing the computed signature of the new content with a signature of other content (see column 13, line 63 – column 14, line 1 – the search phase compares the contents).

However, Gotsman et al fail to teach the further limitation wherein the device is a network caching device. Viswanath discloses a device for identifying content using signatures in a network that utilizes caching (see column 6, lines 46-56).

It would have been obvious to one of ordinary skill at the time the invention was made to use the Viswanath's network caching device as a substitute for Gotsmon et al's device. One would have been motivated to do so in order to increase the abilities of electronic systems to detect the presence of predefined objects (Gotsmon et al: see column 1, lines 19-22).

Referring to claim 35, the combination of Gotsman et al and Viswanath discloses the network caching device of claim 34 wherein the means for computing a signature further comprises:

means for identifying a set of makers associated with the protocol associated with the content (Gotsman et al: see column 13, line 63 – column 14, line 22 – matching the signature to the row is considered to represent associating protocol markers); and

means for obtaining appropriate markers associated with the content (Gotsmon et al: see column 3, line 39-53 – matching the signature to the row is considered to represent obtaining markers).

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- US Patent No 7,062,470 titled "Transaction Signature" to Prasad et al.
- US Patent No 5,643,086 titled "Electronic Casino Gaming Apparatus with Improved Play Capacity, Authentication and Security" to Alcorn et al.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly Lovel whose telephone number is (571) 272-2750. The examiner can normally be reached on 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cottingham can be reached on (571) 272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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25 May 2006

JOHN R. COTTINGHAM
PRIMARY EXAMINER

23 June 2006